lency (two species of animals, each consisting of three dosage groups plus a species control (8 groups total)). Building upon the time savings demonstrated, assuming the hypothetical $1000 per hour ($8,000 per standard workday), performing the study using of one implementation of the processes and devices would cost $360,000; using traditional inhalation systems would theoretically cost $2.8M. Using of one implementation of the processes and devices results in a cost savings to the user of $2.44M. In other terms, performing the 90 day study using of one implementation of the processes and devices only costs approximately 12% of the theoretical cost of performing the study with a traditional exposure system or battery of systems. Uncertainty of dosing would be vastly minimized utilizing of one implementation of the processes and devices over traditional systems, primarily due to monitoring each individual animal's dose, which is an aspect of traditional systems that is not available within the state of the art (at least in a simultaneous dosing scenario). Uncertainty of dosing would be inherently reduced due to the reduction of number of samples that are taken from the generated aerosol for daily dosing of the animals. Measurements of the experimental atmospheric concentration during the 90 separate aerosol generation procedures, using one implementation of the processes and devices, assuming a minimum of three measurements per generation to determine an average and variance of experimental atmospheric concentration, would total 180; traditional inhalation systems would require 720 independent aerosol generation procedures, either single or a battery, assuming equivalency with respect to minimum sampling number per aerosol generation procedure, would require 2,160 measurements. The number of samples needed to characterize the concentration of the aerosol generated for purposes of dosing the animals using one implementation of the processes and devices, as described herein, is reduced by 1,980 samples, or approximately 9% of the number of samples needed to characterize traditional systems. Although the advantages of one implementation of the processes and devices, as described herein, with respect to precision and accuracy demand empirical determination, one skilled in the art would acknowledge that a minimization of the separate aerosol generation procedures and subsequent number of samples needed to characterize the experimental atmosphere designed to deliver a dose will inherently increase precision and accuracy of the dosing of animal groups in the study. The physical space requirements in the laboratory to utilize one implementation of the processes and devices, as described herein, is estimated at 25 sq. ft., this is equivalent to a single traditional inhalation system, although to attain the capacity of dosing of animal groups that is congruent and subsequently comparable with one implementation of the processes and devices, as described herein, would require eight traditional inhalation systems, which would require 200 sq. ft. of physical space. The space requirements using one implementation of the processes and devices, as described herein, is reduced by 175 sq. ft., or approximately 12% of the space requirements of the battery of traditional inhalation systems needed to attain the simultaneous capacity of one implementation of the processes and devices, as described herein.

The invention claimed is:

1. A method comprising:

conditioning an inhalent environment;

exposing a first organism to the inhalent environment for a first-organism duration of time, exposing including

disconnecting a clean-air supply from a first apertured connector, containing at least a part of the first organism, and

coupling the inhalant environment to the first apertured connector for the first-organism duration of time; and

exposing a second organism to the inhalent environment for a second-organism duration of time.

2. The method of claim 1, wherein said coupling the inhalent environment to a first apertured connector, containing at least a part of the first organism, for the first-organism duration of time comprises:

starting the first-organism duration of time upon an initial coupling of the inhalent environment to the first apertured connector containing the at least a part of the first organism; and

terminating the first-organism duration of time when a calculated first-organism delivered dosage meets or exceeds a predefined first-organism target dosage.

3. The method of claim 2, wherein said terminating the first-organism duration of time when a calculated first-organism delivered dosage meets or exceeds a predefined first-organism target dosage comprises:

detecting the first organism via a first-organism biochip device implanted in the first organism; and

recalling the predefined first-organism target dosage in response to the first-organism biochip device.

4. The method of claim 2, wherein said terminating the first-organism duration of time when a calculated first-organism delivered dosage meets or exceeds a predefined first-organism target dosage comprises:

measuring a volume respirated by the first organism;

calculating the first-organism delivered dosage in response to the volume.

5. The method of claim 4, wherein said measuring a volume respirated by the first organism comprises:

measuring a volume of an animal restraint cartridge associated with a first-organism biochip device.

6. The method of claim 5, wherein said measuring a volume of an animal restraint cartridge associated with a first-organism biochip device comprises:

measuring a flow between an interior of the animal restraint cartridge and an exterior of the animal restraint cartridge.

7. The method of claim 1, wherein said coupling the inhalent environment to a first apertured connector, containing at least a part of the first organism, for the first-organism duration of time comprises:

opening a valve between the inhalent environment and the first apertured connector at a first-organism beginning time; and

closing the valve between the inhalent environment and the first apertured connector at a first-organism ending time.